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APPLICATION THAT MET THE REQUIREMENTS TO BE GRANTED A
FILING DATE UNDER 35 USC 111.

APPLICATION NUMBER: *60/439,425*
FILING DATE: *January 13, 2003*

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Certifying Officer

PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c).

Express Mail Label No.	

INVENTOR(S)

Given Name (first and middle [if any])	Family Name or Surname	Residence (City and either State or Foreign Country)
Eitan	LEIBOVITZ	Even Yehuda, ISRAEL

☐ Additional inventors are being named on the _____ separately numbered sheets attached hereto

TITLE OF THE INVENTION (500 characters max)

SYSTEM FOR CONTROLLED RELEASE OF CEMENT MIXTURE FROM A SUSPENDED BUCKET

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ENCLOSED APPLICATION PARTS (check all that apply)

☑ Specification   *Number of Pages*   3   ☐ CD(s), Number ____

☑ Drawing(s)   *Number of Sheets*   3   ☐ Other (specify) ____

☐ Application Data Sheet. See 37 CFR 1.76

METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT

☑ Applicant claims small entity status. See 37 CFR 1.27.

☑ A check or money order is enclosed to cover the filing fees

☑ The Commissioner is hereby authorized to charge filing fees or credit any overpayment to Deposit Account Number: | 01-2221

☐ Payment by credit card. Form PTO-2038 is attached.

FILING FEE AMOUNT ($)
$80.00

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

☑ No.

☐ Yes, the name of the U.S. Government agency and the Government contract number are: _____

Respectfully submitted,

SIGNATURE _____   Date | 01/13/2003

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REGISTRATION NO. (if appropriate) | 33,621

Docket Number: | TSI-043

USE ONLY FOR FILING A PROVISIONAL APPLICATION FOR PATENT

01/13/03

SYSTEM FOR CONTROLLED RELEASE OF CEMENT MIXTURE FROM A
SUSPENDED BUCKET

FIELD OF THE INVENTION

The present invention relates to handling and utilization of cement buckets suspended from cranes.

BACKGROUND OF THE INVENTION

Concrete buckets suspended from cranes are used to distribute flowable concrete into pre – formed forms of a building project. Several operators are needed to direct the bucket to a convenient position above the form, to release the concrete from the bucket and to distribute discharged concrete. Pouring concrete efficiently and safely from suspended concrete buckets is a crucial task in a building project.

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DESCRIPTION OF THE PRESENT INVENTION

In accordance with the present invention, cement is released gravitationally from a suspended cement bucket by the opening of a shutter at the bottom of the bucket. Opening of the bucket outlet is performed by an operator pulling a rope, the length of which is not limited. To explain the mechanism of the release of cement, reference is made now to **Fig. 1**. To bucket **10** is appended a construction frame **12**. A hose **14** at the bottom of the bucket **10** receives the concrete when shutter **16** is opened. In the figure the shutter is partially opened, showing the aperture **18**. Handle **20** is pulled by an operator (not shown) through manipulation of the rope **22**. Spring **24** biases the handle **20** and the shutter **16** towards the bucket **10**. A second operator manipulates the flexible hose **14**, when the shutter is opened, for distributing the flowing concrete. This can however be done by the same operator opening the shutter. In **Fig. 2** the handle **20** has been released by the operator, by loosening the rope **22**. The spring **24** has contracted shutting off the shutter **16**. Concrete can no longer flow of the bucket **10**.

The main structural features of a shutter of the invention are shown in **Fig. 3**. Shutter **40** is slidable by wheels **42** attached at its both flanks (only the wheels at one flank are shown). The wheels roll on rails **44**. In **Fig. 4** the shutter is shown opened, revealing hose flange **50** of the hose described above. At this state, concrete pouring down from the concrete bucket in the direction of arrow **52** can flow downwards through the hose. The shutter **40** closes by pushing in the direction of arrow **54**.

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CLAIM

A suspended concrete bucket comprising a bottom shutter for releasing flowable concrete gravitationally, and wherein said shutter is opened by an operator pulling a rope, and wherein said shutter is biased towards a closed position by a spring.
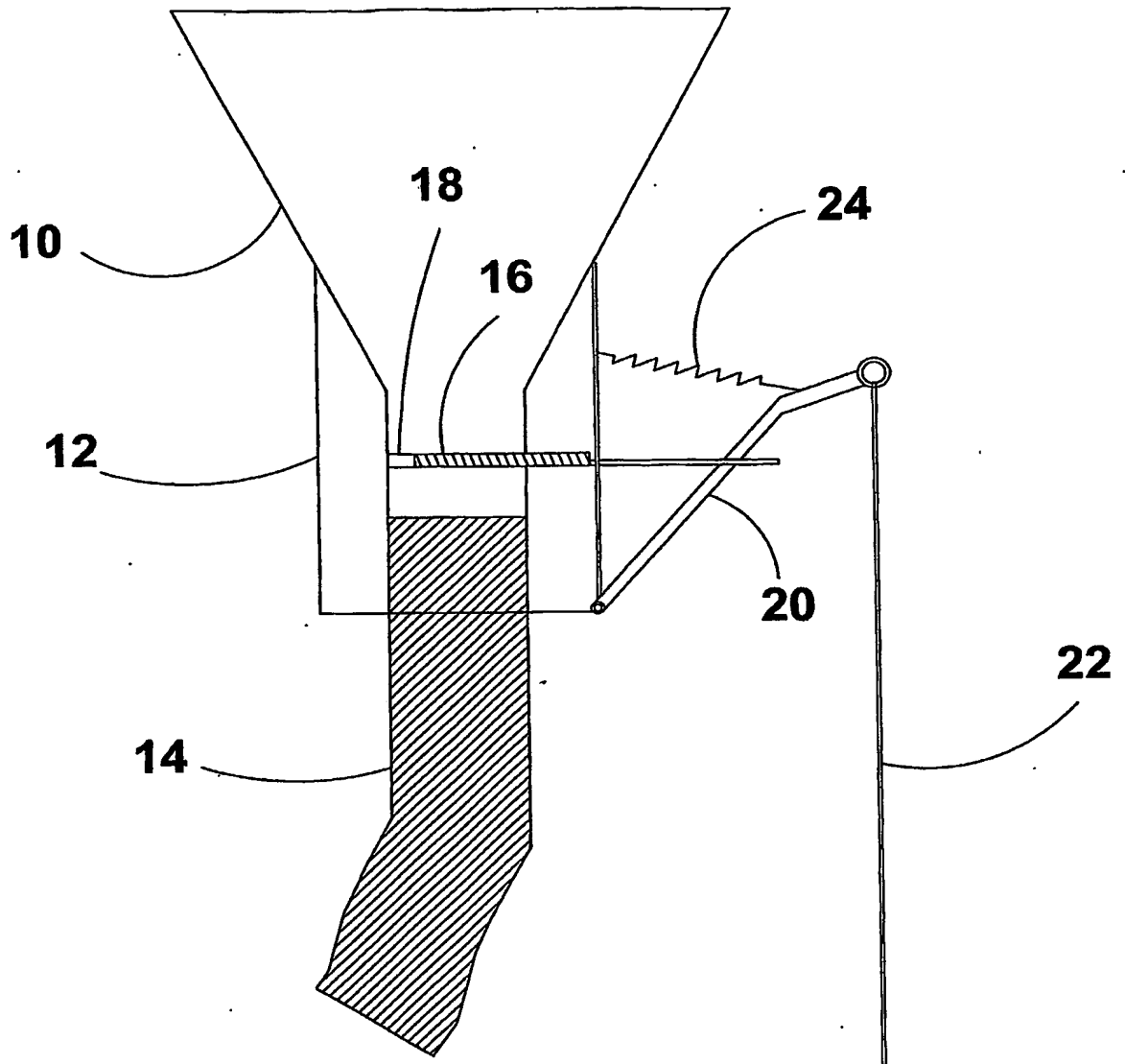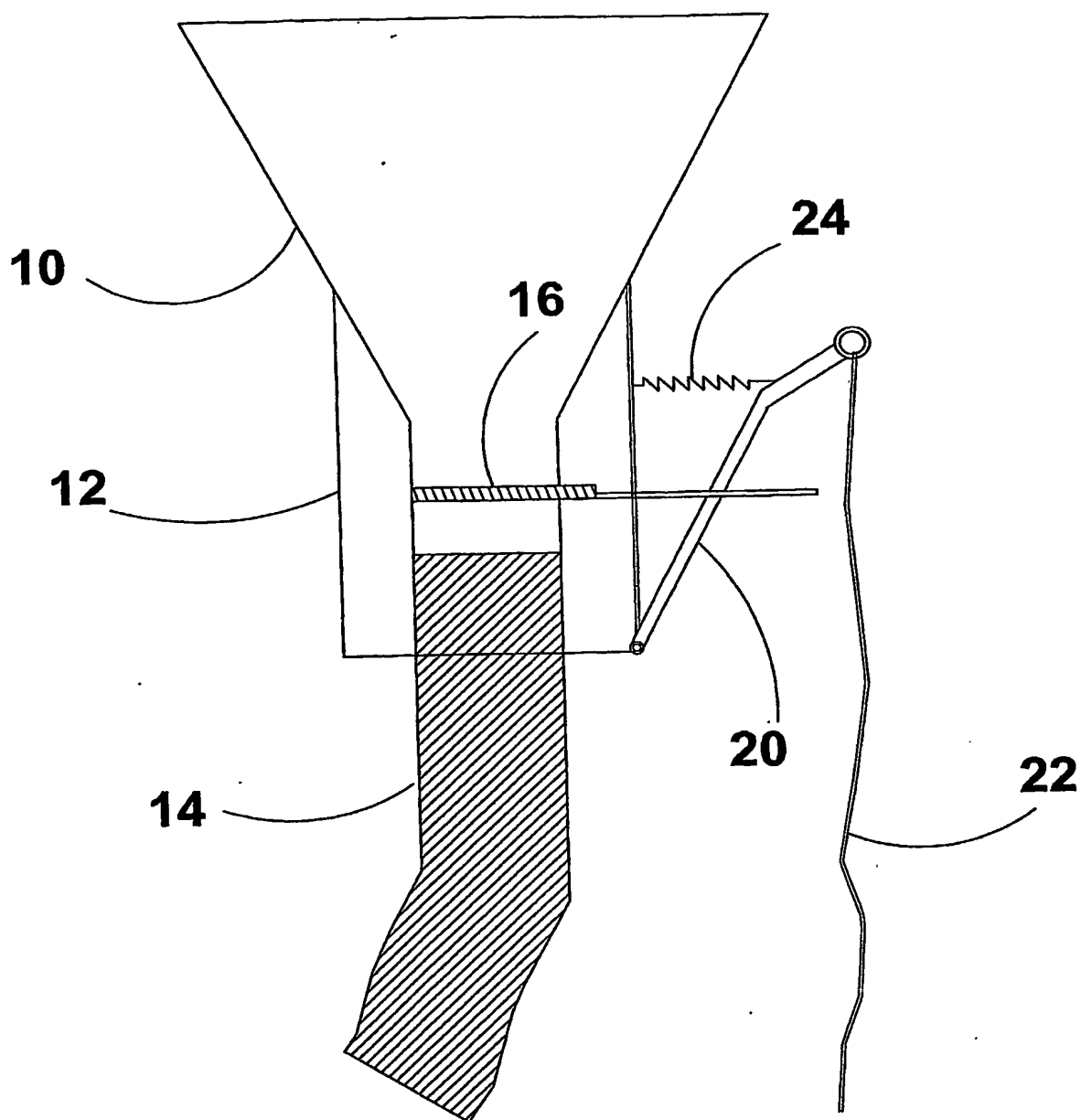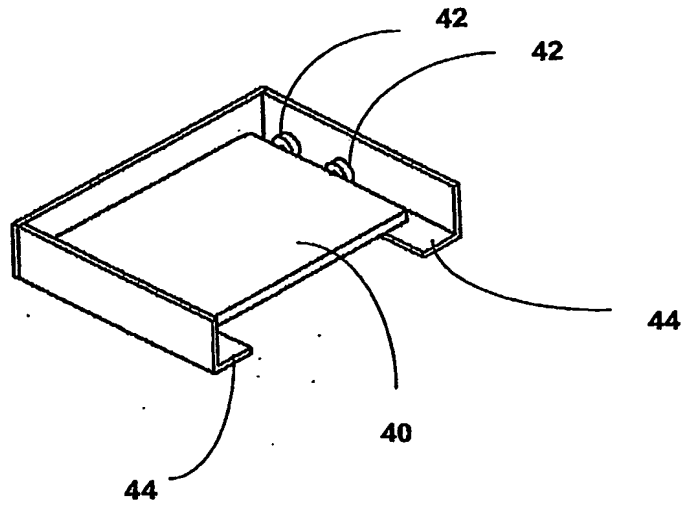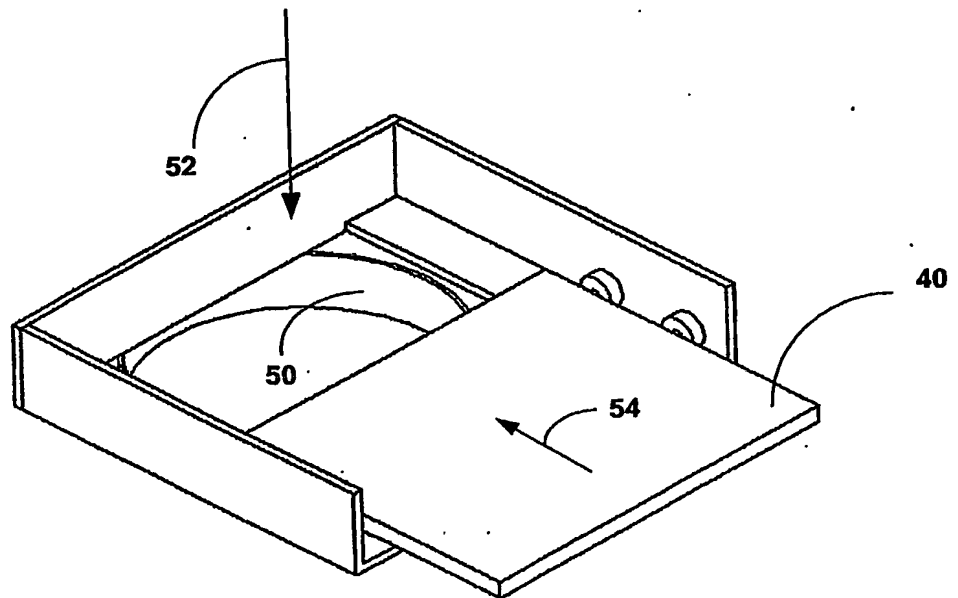
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Fig. 1

Fig. 2

Fig. 3

Fig. 4